

# The Earth Formation Process Analysis According to Science and Quran

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**Abstract:** The process of the formation of the earth has been explained in the Qur'an which has been interpreted by many scholars. Theories of the formation of the earth have also been expressed by previous scientists such as the big bang theory, nebula theory, planetesimal theory, tidal theory, and dust cloud theory. The formation of the earth can be observed not only based on science. But the process of the formation of the earth has been written in the Qur'an long before the creation of the earth and its contents. This paper aims to find out the process of creating the earth based on the Qur'an and science. The writings were arranged using library Research Method. With data collection techniques, namely reviewing scientific articles, books, or other sources of information in print or electronic form that are in accordance with the topic discussed in this paper. The data is then reviewed and analyzed so that conclusions are obtained. Allah wrote the process of creating the earth in the Koran, which was then explained by the big bang theory. In the big bang theory, the beginning of the creation of the earth stems from a big explosion whose effects are felt to this day. It is hoped that this article can add insight and faith to readers.

**Keywords:** Formation of Earth, Big Bang, Qur'an.

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## Introduction

Earth formation occurred around 4.5 billion years ago. Earth was formed from leaking gas and then transformed into a process that can last anywhere from 10 to 20 years. The primary composition of the body is the substance that transforms the body into the only planet on the planet. To become the third planet, as well as the second planet, has resulted in the creation of an optimum living environment. This position allows the body to have a stable temperature among other planets, allowing it to be less dingy and more peaceful.

Awakening bumi is a life-changing experience for humans. However, through developing theories, fisikawan can get insight into the process of developing bodies. The theory of big bang is the most well-known theory of brain development.

The big bang theory reveals that the world formed in space and then grew in size, attracting everything around the lump to the center.

The process of earth formation is also outlined in the Koran, which many experts have read. Previous scientists' theories on the genesis of the earth have likewise become their property. In the Koran, Allah describes the process of creating the cosmos. Some are worldwide, while others are more specific.

## Materials and Methods

This paper was written utilizing the process of literature review. Whereas, literature research is the process of gathering data via reading, writing, and analyzing the material received with the problems to be related (zed, 2008). This article

relies on secondary data. Secondary data, according to Sugiyono, is indirect data derived from other individuals or documents (Sugiyono, 2012).

## Results and Discussion

The end product is a succinct response to the article's headline.

1st Result:

According to science, the big bang theory explains how the planet formed. That the world was formed by a massive explosion around 4.5 billion years ago. The earth's primary constituents are dust and gas. Several scientists and NASA have confirmed this notion.

Result 2: According to the Quran, the process of earth formation has been written down. Surah Al-Araf verse 54 is one among them. Allah tells us in this Quran that the earth was created in six days. The day mentioned in the text is yet unknown. Are days calculated in human terms or 1000 years calculated in human terms?

Result 3: The scientists' explanation of the big bang hypothesis in terms of size may already be linked with QS al-Araf verse 54, which states that scientists can describe the 6-day procedure of constructing the planet. Although the reason requires further investigation

### 1. According to Science, Earth's Formation

Modern scientists believe that the big bang hypothesis is the most likely explanation for the earth's genesis. Many investigations, observations, and physics calculations are now indicating that the planet was formed by a huge explosion 15 billion years ago (Andriana, 2009).

With his theory of relativity, Einstein asserts that the cosmos does not come to an end (Mcevoy and Zarate, 2005). Einstein discovered the proper solution to his cosmological constant equations. He did so because astronomers told Einstein that there

was no other way to verify the equations correct at the time. Einstein recognized that his cosmological constant equation was incorrect.

The big bang hypothesis was proposed by George Gamow and his collaborators Ralph Alpher, Hans Bethe, and Robert Herman. According to Gamow, radiation was distributed across space following the great explosion. Once upon a time, the cosmos was unified in a massive ball of neutrons and radiant energy.

The radiation released in the cosmos is classified into different phases. The first is the Gamow radiation period. It is predicted that hydrogen fusion generates helium at a temperature of 10 billion degrees 27 during the Gamow radiation. Furthermore, at the age of quark radiation, the existing particles are not organized and overlap each other. At the time of the quark radiation, elemental hydrogen had a density of 1 billion to/cm<sup>3</sup>. When the universe was 10<sup>5</sup>-10<sup>6</sup> years old, its temperature was 3000K. Furthermore, at the age of 100 million years-billion years, a spiral gas forms in space, which spins on its axis at the age of 4.5 billion years. That is when the solar system began to develop (Yahya, 2001).

Menurut fisikawan partikel Alan Guth, kecepatan ekspansi alam semesta terus melambat, dan akhirnya kosmos mengalami peristiwa transformasi serentak, membentuk sebuah bola besar yang terus membesar. Setelah itu, Einstein mengusulkan konstanta kosmologis, yang membatasi gerak ekspansi alam semesta.

However, Hubble challenged the constant 28 by stating that there was a red shift, which was supported by Slipher's measurements of the radial velocity of the balls travelling away from the earth. This corresponds to the spectral line that leads to the red wavelength. These findings support the idea that the cosmos is constantly expanding and decreasing.

NASA's high-sensitivity satellites were able to collect some of the radiation from the massive

explosion at the time. This finding adds to the evidence for a large explosion, as well as scientific proof that the cosmos came from nothing (Andriana, 2009).

## 2. According to Quran, Earth's Formation

The process of earth formation is described in the Qur'an, which has been interpreted by numerous scholars. Previous scientists have also stated theories on the birth of the Earth, such as the big bang hypothesis, nebular theory, planetesimal theory, tidal theory, and dust cloud theory.

Allah discusses the genesis of the world in general and particular passages in the Quran. According to Allah, the process of creating the heavens and the earth took six days.

إِنَّ رَبَّكُمُ اللَّهُ الَّذِي خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ فِي سِتَّةِ أَيَّامٍ ثُمَّ اسْتَوَىٰ عَلَى الْعَرْشِ

Truly, your Lord, Allah, is the One who created the heavens and the world in six days and then ascended to the Throne. Al-A'raf: 54 (QS).

According to Ibnu Katsir in al-Bidayah wa an-Nihayah, the meaning of the day in the Quran verses may be translated into two meanings: 1) the meaning of the day from dawn to sunset based on what humans know, and 2) the meaning of the day in the Quran for 1000 years based on human calculations.

According to Ibnu Katsir's commentary, the process of creating the world lasted six days, on Sunday, Monday, Tuesday, Wednesday, Thursday, and Friday. Saturday is not the day of creation since it is the day of cease.

The Messenger of Allah held my hand then said: "Allah, the Mighty, Most High, has created the land (earth) on Saturday, created mountains on it on Sunday, created trees on Monday, created things that are not liked on Tuesday, created light on Wednesday, and spread the animals to him on Thursday, and created Adam alaihissalam after

Asr on Friday at the end of creation at the end of the time of Friday."

According to Prof. Thomas, space experienced celestial body development in order for celestial bodies and their contents, including the earth, to be created. According to the Quran, the process of producing the heavens and the earth may be described by the big bang hypothesis.

According to the Quran, the earth was created in six days. This can be explained by the big bang theory.

The big bang started the development of the earth, which then generated stars. This term is conveyed in the Quran as the phrase completing the sky. as shown by QS An-Naziat verse 28

...رَفَعَ سَمَكَهَا فَسَوَّاهَا...

"He exalted and developed his structure."

The second stage, which consists of hydrogen and helium gases and dust, then condenses and expands. Then it causes a nuclear reaction, which causes a star to shine before bursting and generating the elements that make up other celestial bodies. This appears to be described further in Fussilat letter verse 11, when Allah states

ثُمَّ اسْتَوَىٰ إِلَى السَّمَاءِ وَهِيَ دُخَانٌ فَقَالَ لَهَا وَلِلْأَرْضِ ائْتِيَا طَوْعًا أَوْ كَرْهًا قَالَتَا أَتَيْنَا طَائِعِينَ .

"Then He went to the sky, and (the sky) was still smoke, and He said to him and to the ground, "Come both of you according to My directions, obediently or forcefully." "We came obediently," the two said.

According to Thomas, the third and fourth phases are the creation of the heavens, which might occur after or before the creation of the world, because the process continues. According to QS An-Naziat verse 31, the fifth stage involves plant growth and water emerging.

أَخْرَجَ مِنْهَا مَاءَهَا وَمَرْعَاهَا

It emits springs and (grows) flora from it. The last stage is the process of photosynthesis, which arose in plants around 2 billion years ago.

### Conclusions

The formation of the world may be examined not only via science, but also through the study of the Koran based on expert interpretations. Scientific research can be used to explain the Quranic account of the earth's origin, which lasted six days. However, further tests and verification are required to reinforce this theory. It is intended that through writing this, readers would gain knowledge and trust in the creation of the planet.

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